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DEVELOPMENT OF A DECISION TAXONOMY FOR THE MARINE COMMAND AND C--ETC(U)
JUN 79 A CROLOTTE , J SALEH N00014-78-C-0495
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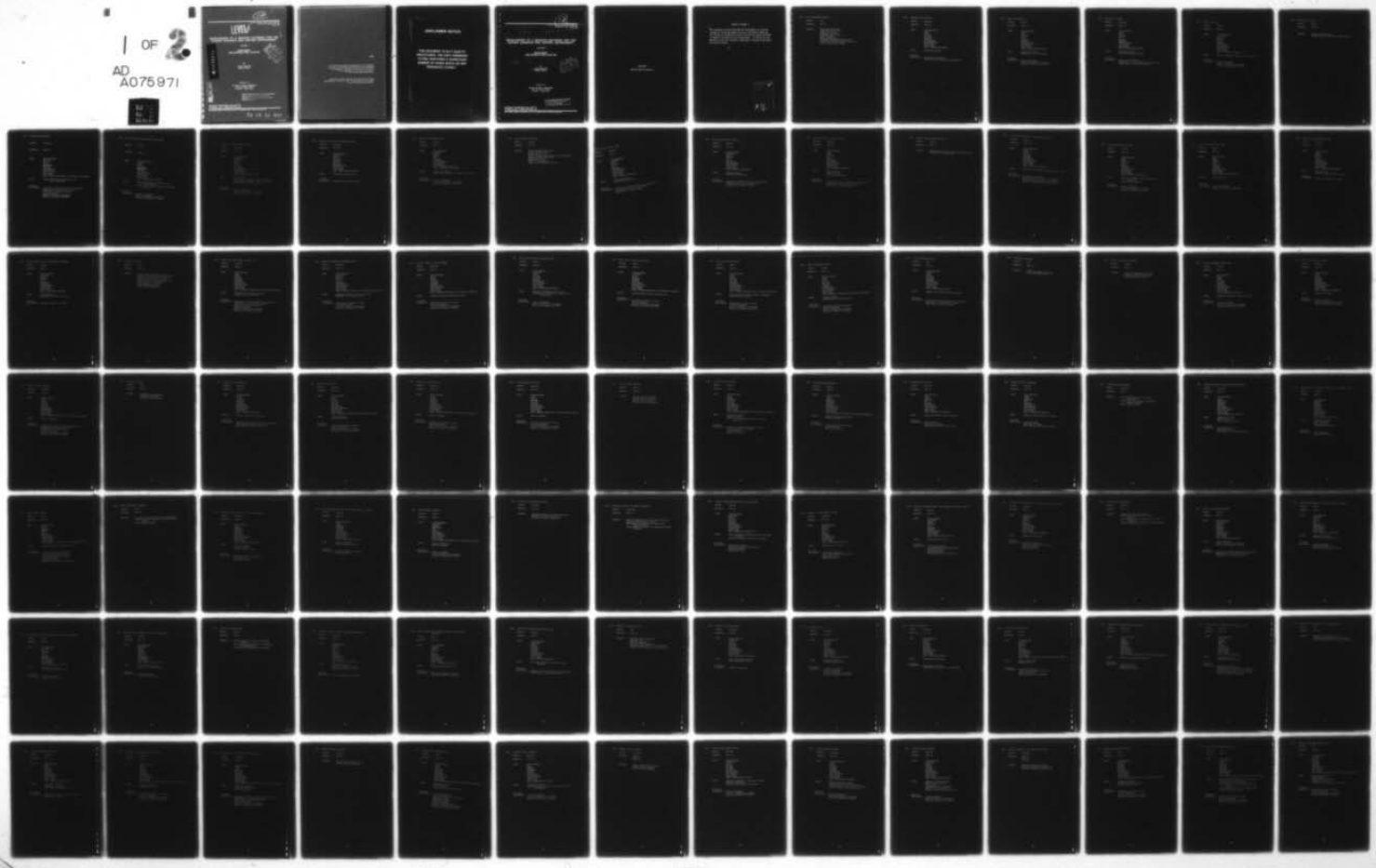

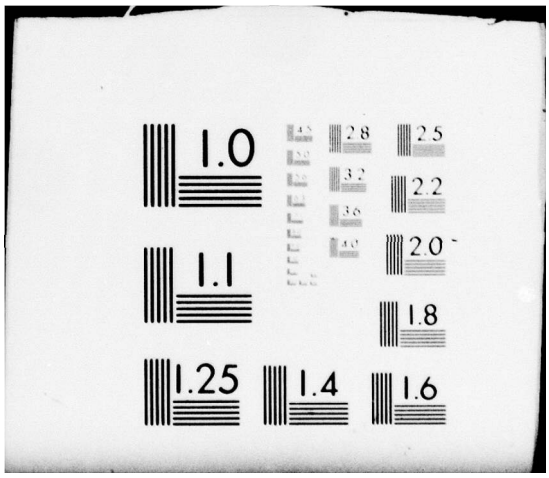
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Annual Technical Report PATR-1069-79-6
Contract No. N000-14-78-C-0495
June, 1979

LEVEL II

DEVELOPMENT OF A DECISION TAXONOMY FOR THE MARINE COMMAND AND CONTROL ENVIRONMENT

VOLUME II

SUPPLEMENT
MAB DECISION TASK ANALYSIS

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NOV 14 1979
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BY

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Annual Technical Report PATR-1069-79-6-Vol-2
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VOLUME II

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(9) Annual technical rept.

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SUPPLEMENT

MAB DECISION TASK ANALYSIS

PREFACE TO VOLUME II

This supplement to report PATR-1069-79-6 (Development of a Decision Taxonomy for the Marine Command and Control Environment) summarizes the findings of the MAB decision-task classification process performed in support of the decision task taxonomy phase. It provides for each MAB decision task the information requirements, functional requirements and attribute values.

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TASK: ATF/LF PRELIMINARY PLANNING

KEYWORD: Plan

REFERENCE: FMFM 3-1

SUBTASKS:
Determine ATF Objectives
Select ATF General C/A
Determine LF Mission
Determine Landing Sites
Select Beachhead
Select Landing Areas
Determine Tentative D-Day and H-Hour
Formulate LF Concept of Operations Ashore
Decide on Other Major Issues

TASK: DETERMINE ATF OBJECTIVES

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Initiating Directive

FUNCTIONAL REQUIREMENTS:
Recognition of Standards
Identification of Dimensions and Parameters

TASK: SELECT ATF GENERAL C/A

KEYWORD: Select

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Static
One Shot
Risk
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Initiating Directive
Determination of ATF Objectives

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE LF MISSION

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Static
One Shot
Risk
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS:
Initiating Directive
ATF General Courses of Action

FUNCTIONAL REQUIREMENTS:
Recognition of Standards
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains

TASK: SELECT BEACHHEAD

KEYWORD: Select

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Various Alternative Beachheads proposed by CLF

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: SELECT LANDING AREAS

KEYWORD: Select

REFERENCE: FMFM 3-1

SUBTASKS: Designate Landing Areas
Select Primary and Alternative Landing Areas

TASK: DESIGNATE LANDING AREAS

KEYWORD: Designate

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Uncertainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Mission Intelligence Information on the Area of Operations

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: SELECT PRIMARY AND ALTERNATIVE LANDING AREAS

KEYWORD: Select

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Static
One Shot
Uncertainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Mission Intelligence Information on the Enemy Situation
Ranked List of Feasible Landing Areas Defined by CATF

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE TENTATIVE D-DAY AND H-HOUR

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
LF Objectives
Broad Courses of Action under Consideration
Intelligence Information (enemy and terrain)
Requirements for Logistic Support

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: FORMULATE LF CONCEPT OF OPERATIONS ASHORE

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: LF Mission and Landing Sites

FUNCTIONAL REQUIREMENTS: Formulation of Courses of Action

TASK: DECIDE ON OTHER MAJOR ISSUES

KEYWORD: Decide

REFERENCE: FMFM 3-1

CLASS:
- Multi-attribute
- Individual
- Static
- One Shot
- Risk
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Small Probability High Loss
- Type 2 (Alternative Selection)

INPUTS:
- Initiating Directive
- Intelligence Information (strategic and tactical)

FUNCTIONAL REQUIREMENTS:
- Criteria Assignment
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: DEVELOP OPERATIONS ESTIMATE

KEYWORD: Estimate

REFERENCE: FMFM 3-1

SUBTASKS:
Analyze Landing Force Mission
Generate Friendly C/A's
Analyze Friendly C/A's
Analyze Characteristics of the Area of Operations
Analyze Relative Combat Power
Analyze Enemy C/A's
Compare Friendly C/A's
Select C/A for Commander's Briefing

ANALYZE LANDING FORCE MISSION

KEYWORD: Analyze

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS:
Planning Guidance
Intelligence Information

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action

TASK: ANALYZE LANDING FORCE MISSION

KEYWORD: Analyze

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS:
Planning Guidance
Intelligence Information

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action

TASK: GENERATE FRIENDLY COURSES OF ACTION

KEYWORD: Generate

REFERENCE: FMFM 3-1

CLASS:
- Multi-attribute
- Group
- Static
- One Shot
- Risk
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 1 (Problem Structuring)

INPUTS:
- Mission Analysis
- Planning Guidance
- Intelligence Information

FUNCTIONAL REQUIREMENTS:
- Recognition of Option Existence and Constraints
- Establishment of Plausibility Domains
- Formulation of Courses of Action

TASK: ANALYZE FRIENDLY COURSES OF ACTION

KEYWORD: Analyze

REFERENCE: FMFM 5-1

SUBTASKS: Analyze Characteristics of the Area of Operations
Analyze Relative Combat Power

TASK: ANALYZE CHARACTERISTICS OF THE AREA OF OPERATIONS

KEYWORD: Analyze

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Intelligence Information (weather, terrain, etc.)

FUNCTIONAL REQUIREMENTS:
Recognition of Standards
Identification of Dimensions and Parameters
Problem Emergency Criteria and Thresholds
Comparison of Actual and Desirable States

TASK: ANALYZE RELATIVE COMBAT POWER

KEYWORD: Analyze

REFERENCE: FMFM 3-1

CLASS:
- Multi-attribute
- Group
- Static
- One Shot
- Risk
- Concrete
- Ambiguous
- Decision-Making
- Time Relaxed
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- Initiating Directive (which assigns forces available)
- Intelligence Information

FUNCTIONAL REQUIREMENTS
- Criteria Assignment
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: ANALYZE ENEMY COURSES OF ACTION

KEYWORD: Analyze

REFERENCE: FMFM 3-1

CLASS:
- Multi-attribute
- Group
- Static
- One Shot
- Risk
- Concrete
- Ambiguous
- Decision-Making
- Time Relaxed
- Normal Range
- Type 2 (Alternative Selection)

INPUTS: Staff Estimates

FUNCTIONAL REQUIREMENTS:
- Criteria Assignment
- Risks and Probability Assignments

TASK: COMPARE FRIENDLY COURSES OF ACTION

KEYWORD: Compare

REFERENCE: FMFM 3-1

CLASS:
- Multi-attribute
- Group
- Static
- One Shot
- Risk
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- Staff Estimates
- Analysis of Enemy Courses of Action

FUNCTIONAL REQUIREMENTS:
- Analysis of Outcomes and Impacts

TASK: SELECT COURSE OF ACTION FOR COMMANDER'S BRIEFING

KEYWORD: Select

REFERENCE: FMFM 3-1

CLASS:
- Multi-attribute
- Individual
- Static
- One Shot
- Risk
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- Staff Estimates
- Comparisons of Courses of Action

FUNCTIONAL REQUIREMENTS: Analysis of Outcomes and Impacts

TASK: PREPARE OUTLINE PLAN

KEYWORD: Plan

REFERENCE: FMFM 3-1

SUBTASKS:
Prepare Task Organization and Troop List
Determine Missions for Subordinate Units
Determine Tactical Control Measures
Select Landing Beaches and Landing Zones
Select Date and Time of Landings
Select Formation of Landing
Select Shipping Allocation
Outline Alternative Plans

TASK: PREPARE TASK ORGANIZATION AND TROOP LIST

KEYWORD: Organize

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Determination of Mission Objectives
Concept of Operations Ashore

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE MISSIONS FOR SUBORDINATE UNITS

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Commander's Concept of Operations Ashore
Statement of the Command Mission

FUNCTIONAL REQUIREMENTS:
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE TACTICAL CONTROL MEASURES

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Commader's Concept of Operations Ashore

FUNCTIONAL REQUIREMENTS:
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: SELECT LANDING BEACHES AND LANDING ZONES

KEYWORD: Select

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Commander's Statement of the Mission
Requirements of Subordinate Elements of the Landing Force

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: SELECT DATE AND TIME FOR LANDING(S)

KEYWORD: Select

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Landing Beaches and Zones Selected by CLF

FUNCTIONAL REQUIREMENTS:
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: SELECT FORMATION FOR LANDING

KEYWORD: Select

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Landing Beaches and Zones Selected by Commander
Date and Time of Landing

FUNCTIONAL REQUIREMENTS:
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: SELECT SHIPPING ALLOCATION

KEYWORD: Select

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Logistic Estimate
Determination of Landing Beaches

FUNCTIONAL REQUIREMENTS:
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: OUTLINE ALTERNATIVE PLANS

KEYWORD: Plan

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Commmander's Concept of Operations Ashore

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action

TASK: PREPARE PLAN OF ATTACK

KEYWORD: Plan

REFERENCE: FMFM 3-1

SUBTASKS: Prepare the Scheme op Maneuver
Prepare the Landing Plan

TASK: PREPARE THE SCHEME OF MANEUVER

KEYWORD: Prepare

REFERENCE: FMFM 3-1

SUBTASKS: Finalize Objectives for All Units
Finalize Distribution of Forces
Determine Control Measures

TASK: FINALIZE OBJECTIVES FOR ALL UNITS

KEYWORD: Finalize

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Commander's Concept of Operations Ashore

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: FINALIZE DISTRIBUTION OF FORCES

KEYWORD: Finalize

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of Mission

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE CONTROL MEASURES

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Scheme of maneuver

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: PREPARE LANDING PLAN

KEYWORD: Plan

REFERENCE: FMFM 3-1

SUBTASKS: Determine Lift Requirements
Allocate Landing Means
Determine Landing Sequence

TASK: DETERMINE LIFT REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Initial Scheme of Maneuver Ashore

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action

TASK: ALLOCATE LANDING MEANS

KEYWORD: Allocate

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Lift Requirements
Availability Tables

FUNCTIONAL REQUIREMENTS:
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE LANDING SEQUENCE

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS:
- Multi-attribute
- Group
- Static
- One Shot
- Certainty
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Scheme of Maneuver

FUNCTIONAL REQUIREMENTS:
- Formulation of Courses of Action
- Criteria Assignment
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: DETERMINE ASSAULT SEQUENCE

KEYWORD: Determine

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Scheme of Maneuver

FUNCTIONAL REQUIREMENTS:
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEVELOP THE INTELLIGENCE ESTIMATE

TASK: CONTROL GROUND OPERATIONS

KEYWORD: Control

REFERENCE: FMFM 3-1

SUBTASKS:
Analyze Tactical Situation
Analyze Available Resources
Appraise Need for Action
Appraise Need for Information

TASK: ANALYZE TACTICAL SITUATION

KEYWORD: Analyze

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Statement of Mission
ATF/LF Objectives
Current Tactical Situation (graphic displays, maps, etc.)

FUNCTIONAL REQUIREMENTS:
Comparison of Actual and Desirable States
Situation Monitoring Parameters
Impact Evaluation
Recognition of Change

TASK: IDENTIFY CHARACTERISTICS OF THE AREA OF OPERATIONS

TASK: ANALYZE AVAILABLE RESOURCES

KEYWORD: Analyze

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Reports from Subordinate Units
Logistic Situation

FUNCTIONAL REQUIREMENTS:
Situation Monitoring Parameters
Impact Evaluation
Recognition of Change

TASK: APPRAISE NEED FOR ACTION

KEYWORD: Appraise

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Dynamic
Repetitive
Risk
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 2 (Alternative Selection)

INPUTS: Analysis of Current Tactical Situation

FUNCTIONAL REQUIREMENTS:
Impact Evaluation
Recognition of Change
Short Range and Long Range Evaluation

TASK: APPRAISE NEED FOR INFORMATION

KEYWORD: Appraise

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Dynamic
Repetitive
Risk
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 2 (Alternative Selection)

INPUTS: Analysis of Current Tactical Situation

FUNCTIONAL REQUIREMENTS:
Impact Evaluation
Recognition of Change
Short Range and Long Range Evaluation

TASK: INTEGRATE FIRE AND MANEUVER

KEYWORD: Integrate

REFERENCE: FMFM 3-1

SUBTASKS:
- Correlate Current Status and Mission Requirements
- Evaluate Rate and Direction of Planned and In-Progress Fires
- Update Control Measures

TASK: DETERMINE ENEMY CAPABILITIES

TASK: CORRELATE CURRENT STATUS AND MISSION REQUIREMENTS

KEYWORD: Correlate

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision Execution
Time Critical
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Statement of Mission
ATF/LF Objectives
Current Tactical Situation

FUNCTIONAL REQUIREMENTS:
Impact Evaluation
Recognition of Change
Short Range and Long Range Evaluation

TASK: EVALUATE RATE AND DIRECTION OF PLANNED AND IN-PROGRESS FIRES

KEYWORD: Evaluate

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Individual
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Statement of Mission
ATF/LF Objectives
Fire Support Plans
Current Tactical Situation

FUNCTIONAL REQUIREMENTS:
Impact Evaluation
Recognition of Change

TASK: UPDATE CONTROL MEASURES

KEYWORD: Update

REFERENCE: FMFM 3-1

CLASS:
- Multi-attribute
- Group
- Dynamic
- Repetitive
- Risk
- Concrete
- Well-Defined
- Decision-Making
- Time Critical
- Normal Range
- Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Current Status and Mission Requirements

FUNCTIONAL REQUIREMENTS:
- Situation Monitoring Parameters
- Formulation of Courses of Action
- Risks and Probability Assignments
- Impact Evaluation
- Recognition of Change
- Short Range and Long Range Evaluation

TASK: MODIFY THE SCHEME OF MANEUVER

KEYWORD: Modify

REFERENCE: FMFM 3-1

SUBTASKS: Correlate Current Status and Mission Requirements
Evaluate Rate and Direction of Present Scheme of Maneuver
Update Scheme of Maneuver

TASK: CORRELATE CURRENT STATUS AND MISSION REQUIREMENTS

KEYWORD: Correlate

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision Execution
Time Critical
Normal Range
Type 2 (Alternative Selection)

INPUTS:
ATF/LF Objectives
Scheme of Maneuver
Current Tactical Situation

FUNCTIONAL REQUIREMENTS:
Situation Monitoring Parameters
Impact Evaluation
Recognition of Change

TASK: EVALUATE RATE AND DIRECTION OF PRESENT SCHEME OF MANEUVER

KEYWORD: Evaluate

REFERENCE: FMFM 3-1

CLASS:
- Multi-attribute
- Group
- Dynamic
- Repetitive
- Certainty
- Concrete
- Well-Defined
- Decision-Making
- Time Critical
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- Scheme of Maneuver
- Current Tactical Situation

FUNCTIONAL REQUIREMENTS:
- Situation Monitoring Parameters
- Impact Evaluation

TASK: UPDATE SCHEME OF MANEUVER

KEYWORD: Update

REFERENCE: FMFM 3-1

CLASS:
Multi-attribute
Individual
Dynamic
Repetitive
Risk
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Mission Requirements
Scheme of Maneuver

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEVELOP THE INTELLIGENCE ESTIMATE

KEYWORD: Estimate

REFERENCE: FMFM 2-1

SUBTASKS: Coordinate Report on the Area of Operations
Determine the Enemy's Capabilities
Analyze the Enemy's Capabilities

TASK: COORDINATE REPORT ON THE AREA OF OPERATIONS

KEYWORD: Coordinate

REFERENCE: FMFM 2-1

SUBTASKS:
- Identify Characteristics of the Area of Operation
- Determine Enemy Military Situation
- Assess Enemy Unconventional and Pschological Warfare Situation
- Analyze Enemy Intelligence and Counter-intelligence Activities

TASK: IDENTIFY CHARACTERISTICS OF THE AREA OF OPERATIONS

KEYWORD: Identify

REFERENCE: FMFM 2-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Mission Statement Including Subtasks and Assigned Priorities
Reasons for Assigning Mission to the Command

FUNCTIONAL REQUIREMENTS:
Information Purchasing
Source Identification and Selection
Information Ranking
Applying Stop Rules

TASK: DETERMINE ENEMY MILITARY SITUATION

KEYWORD: Determine

REFERENCE: FMFM 2-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of the Mission

FUNCTIONAL REQUIREMENTS:
Information Purchasing
Source Identification and Selection
Information Ranking
Applying Stop Rules

TASK: ANALYZE ENEMY UNCONVENTIONAL AND PSYCHOLOGICAL WARFARE SITUATION

KEYWORD: Analyze

REFERENCE: FMFM 2-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of the Mission

FUNCTIONAL REQUIREMENTS:
Information Purchasing
Source Identification and Selection
Information Ranking
Applying Stop Rules
Risks and Probability Assignments

TASK: ANALYZE ENEMY INTELLIGENCE AND COUNTER-INTELLIGENCE ACTIVITIES

KEYWORD: Analyze

REFERENCE: FMFM 2-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Statement of the Mission

FUNCTIONAL REQUIREMENTS:
Information Purchasing
Source Identification and Selection
Information Ranking
Applying Stop Rules

TASK: DETERMINE ENEMY CAPABILITIES

KEYWORD: Determine

REFERENCE: FMFM 2-1

SUBTASKS:
- Identify All Enemy Capabilities
- Select Enemy Capabilities for Further Analysis
- Assess Earliest Time of Execution Of Each Enemy Capability
- Identify Maximum Strength of Each Enemy Capability

TASK: IDENTIFY ALL ENEMY CAPABILITIES

KEYWORD: Identify

REFERENCE: FMFM 2-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS:
Mission Statement
Report on the Area of Operations
Overall Enemy Strategic Situation

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action

TASK: SELECT ENEMY CAPABILITIES SUITABLE FOR FURTHER ANALYSIS

KEYWORD: Select

REFERENCE: FMFM 2-1

CLASS:
- Multi-attribute
- Individual
- Static
- One Shot
- Risk
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- Statement of Mission
- List of All Enemy Capabilities

FUNCTIONAL REQUIREMENTS:
- Criteria Assignment
- Establish Decision Rules
- Analysis of Outcomes and Impacts

TASK: ASSESS EARLIEST TIME OF EXECUTION OF EACH ENEMY CAPABILITY

KEYWORD: Assess

REFERENCE: FMFM 2-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Statement of Mission
List of All Enemy Capabilities

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Establish Decision Rules

TASK: IDENTIFY MAXIMUM STRENGTH OF EACH ENEMY CAPABILITY

KEYWORD: Identify

REFERENCE: FMFM 2-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Statement of the Mission
List of All Enemy CApabilities

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Establish Decision Rules

TASK: ANALYZE ENEMY CAPABILITIES

KEYWORD: Analyze

REFERENCE: FMFM 2-1

SUBTASKS:
- Determine Impact on Mission of Each Enemy Capability
- Determine Relative Probability of Adoption of Enemy Capabilities
- Identify the Vulnerabilities of the Enemy

TASK: DETERMINE IMPACT ON MISSION OF EACH ENEMY CAPABILITY

KEYWORD: Determine

REFERENCE: FMFM 2-1

CLASS:
- Multi-attribute
- Individual
- Static
- One Shot
- Risk
- Concrete
- Ambiguous
- Decision-Making
- Time Relaxed
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- Statement of Mission
- List of All Enemy Capabilities
- Previous Intelligence Analysis

FUNCTIONAL REQUIREMENTS: Risks and Probability Assignments

TASK: PREDICT RELATIVE PROBABILITY OF ADOPTION OF EACH ENEMY CAPABILITY

KEYWORD: Predict

REFERENCE: FMFM 2-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Previous Intelligence Analysis

FUNCTIONAL REQUIREMENTS:
Information Situation Diagnosis
Risks and Probability Assignments

TASK: IDENTIFY THE VULNERABILITIES OF THE ENEMY

KEYWORD: Identify

REFERENCE: FMFM 2-1

CLASS: Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Intelligence Report on the Enemy Military Situation

FUNCTIONAL REQUIREMENTS: Recognition of Option Existence and Constraints
Establishment of Plausibility Domains

TASK: DEVELOP THE COLLECTION PLAN

KEYWORD: PLAN

REFERENCE: FMFM 2-1

SUBTASKS:
Determine Basic Requirements
Determine EEI's
Determine Indicators
Select Collection Agencies
Supervise and Coordinate Collection Effort
Appraise Need for Revision of Collection Plan

TASK: DETERMINE BASIC REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 2-1

CLASS:
Single Attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Type of Operation envisioned
Basic Requirements Outline

FUNCTIONAL REQUIREMENTS: Information Purchasing

TASK: DETERMINE EEI'S

KEYWORD: Determine

REFERENCE: FMFM 2-1

CLASS:
- Single Attribute
- Individual
- Dynamic
- One Shot
- Risk
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- Information Available
- Information Requirements

FUNCTIONAL REQUIREMENTS:
- Information Purchasing
- Criteria Assignment
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: DETERMINE INDICATORS

KEYWORD: Determine

REFERENCE: FMFM 2-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS: Intelligence Requirements

FUNCTIONAL REQUIREMENTS:
Recognition of Standards
Identification of Dimensions and Parameters

TASK: SELECT COLLECTION AGENCIES

KEYWORD: Select

REFERENCE: FMFM 2-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Overall Requirements
Agencies Available

FUNCTIONAL REQUIREMENTS:
Information Purchasing
Source Identification and Selection
Criteria Assignment
Risks and Probability Assignments

TASK: SUPERVISE AND COORDINATE COLLECTION EFFORT

KEYWORD: Supervise

REFERENCE: FMEM 2-1

CLASS:
Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Orders and Requests for Information

FUNCTIONAL REQUIREMENTS:
Applying Stop Rules
Impact Evaluation
Recognition of Change

TASK: APPRAISE NEED FOR REVISION OF THE COLLECTION PLAN

KEYWORD: Appraise

REFERENCE: FMFM 2-1

CLASS:
- Single attribute
- Individual
- Dynamic
- Repetitive
- Risk
- Concrete
- Well Defined
- Decision-Making
- Time Critical
- Normal Range
- Type 1 (Problem Structuring)

INPUTS:
- Information Received
- New Information Requirements

FUNCTIONAL REQUIREMENTS:
- Recognition of Standards
- Identification of Dimensions and Parameters
- Problem Emergency Criteria and Thresholds
- Comparison of Actual and Desirable States
- Situation Monitoring Parameters

TASK: DEVELOP THE RECONNAISSANCE AND SURVEILLANCE PLAN

KEYWORD: Plan

REFERENCE: FMFM 2-1

SUBTASKS: Determine Requirements for R&S
Integrate Reconnaissance and Surveillance
Coordinate R&S Planning with Other Operations

TASK: DETERMINE REQUIREMENTS FOR R&S

KEYWORD: Determine

REFERENCE: FMFM 2-1

CLASS:
- Multi-attribute
- Group
- Dynamic
- One Shot
- Certainty
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- Statement of Mission
- Information Requirements
- Intelligence Information Available

FUNCTIONAL REQUIREMENTS:
- Comparison of Actual and Desirable States
- Information Purchasing

TASK: INTEGRATE RECONNAISSANCE AND SURVEILLANCE

KEYWORD: Integrate

REFERENCE: FMFM 2-1

CLASS:
- Multi-attribute
- Group
- Dynamic
- One Shot
- Certainty
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
- Statement of Mission
- Requirements for R&S

FUNCTIONAL REQUIREMENTS:
- Formulation of Courses of Action
- Criteria Assignment
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: COORDINATE R&S PLANNING WITH OTHER OPERATIONS

KEYWORD: Coordinate

REFERENCE: FMFM 2-1

CLASS:
Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Statement of Mission
Information Requirements
Plan of Operations

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: PERFORM TARGET INTELLIGENCE

KEYWORD: Perform

REFERENCE: FMFM 2-1

SUBTASKS: Develop Target Acquisition Plan
Interpet Target Information

TASK: DEVELOP TARGET ACQUISITION PLAN

KEYWORD: Plan

REFERENCE: FMFM 2-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Statement of Mission
List of Targets
Sources and Collection Agencies

FUNCTIONAL REQUIREMENTS:
Information Purchasing
Source Identification and Selection
Information Ranking
Applying Stop Rules
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: INTERPRET TARGET INFORMATION

KEYWORD: Interpret

REFERENCE: FMFM 2-1

CLASS:
- Multi-attribute
- Group
- Dynamic
- Repetitive
- Certainty
- Concrete
- Well-Defined
- Decision-Making
- Time Critical
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- Statement of Mission
- Target Information Available (description, degree of protection)

FUNCTIONAL REQUIREMENTS:
- Criteria Assignment
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: PREPARE INITIAL ESTIMATES

KEYWORD: ESTIMATE

REFERENCE: FMFM 5-1
FMFM 7-2
FMFM 7-4

SUBTASKS: Prepare Naval Gunfire Estimate
Prepare Aviation Estimate
Prepare Artillery Estimate

TASK: PREPARE NAVAL GUNFIRE ESTIMATE

KEYWORD: Estimate

REFERENCE: FMFM 7-2

CLASS:
Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Commander's Analysis of the Overall Mission
Other Staff Estimates
Courses of Action Under Consideration

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: PREPARE AVIATION ESTIMATE

KEYWORD: Estimate

REFERENCE: FMFM 5-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Mission of Aviation Element
Characteristics of the Objective Area
Characteristics of Enemy Forces and Targets
Courses of Action Under Consideration

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: PREPARE ARTILLERY ESTIMATE

KEYWORD: Estimate

REFERENCE: FMFM 7-4

CLASS:
Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Concept of Operations Ashore
Capabilities of the Enemy
Type of Terrain
Transportation Means Available
Amount of Artillery Available
Courses of Action Under Consideration

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE OVERALL LF FIRE SUPPORT REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 5-1
FMFM 7-2
FMFM 7-4

SUBTASKS: Formulate Preliminary NGF Plan
Formulate Preliminary Aviation Plan
Formulate Preliminary Artillery Plan

TASK: FORMULATE PRELIMINARY NGF PLAN

KEYWORD: Plan

REFERENCE: FMFM 7-2

CLASS:
- Multi-attribute
- Individual
- Dynamic
- One Shot
- Certainty
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
- Statement of Mission
- Concept of Operations Ashore
- Intelligence Information

FUNCTIONAL REQUIREMENTS:
- Formulation of Courses of Action
- Criteria Assignment
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: FORMULATE PRELIMINARY AVIATION PLAN

KEYWORD: Plan

REFERENCE: FMFM 5-1

CLASS:
- Multi-attribute
- Individual
- Static
- One Shot
- Certainty
- Concrete
- Abstract
- Decision-Making
- Time Relaxed
- Normal Range
- Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
- MAGTF Commander's Estimate of the Situation
- Mission of the Aviation Element
- Characteristics of the Objective Area
- Type, Composition, and Organization of Enemy Forces
- Target Characteristics of the Objective Area
- Concept of Operations Ashore

FUNCTIONAL REQUIREMENTS:
- Formulation of Courses of Action
- Criteria Assignment
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: FORMULATE PRELIMINARY ARTILLERY PLAN

KEYWORD: Plan

REFERENCE: FMFM 7-4

CLASS:
Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Landing Force Mission
Enemy Situation
Requires Artillery Support
Topography and Weather
Observations and Communication Required

FUNCTIONAL REQUIREMENTS:
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

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DEVELOPMENT OF A DECISION TAXONOMY FOR THE MARINE COMMAND AND C--ETC(U)
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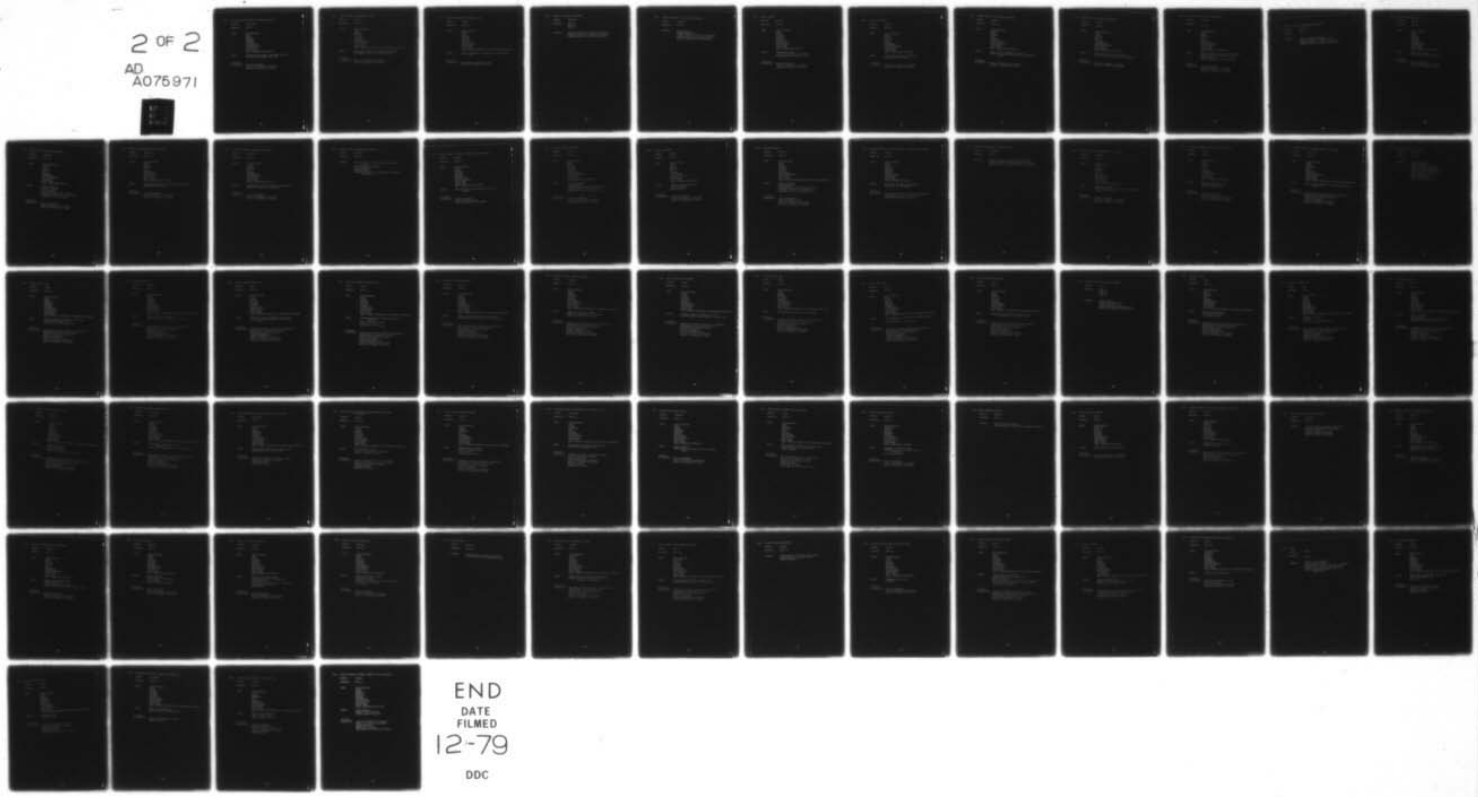

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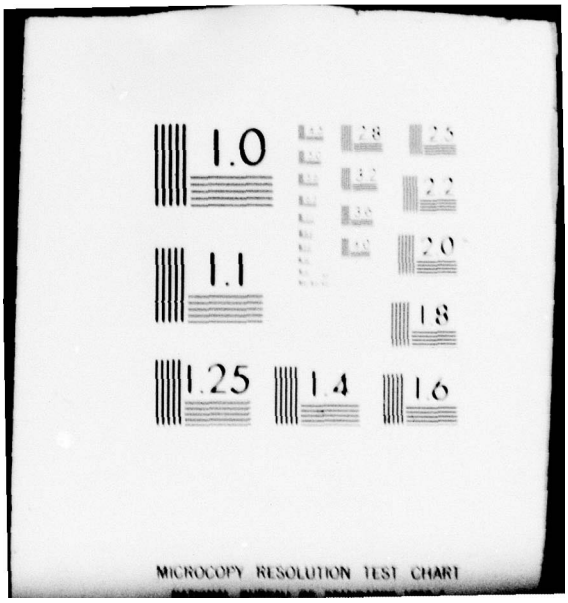
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MICROCOPY RESOLUTION TEST CHART

TASK: CONSOLIDATE FIRE SUPPORT AND NAVAL REQUIREMENTS

KEYWORD: Consolidate

REFERENCE: FMFM 7-1

CLASS: Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: LF Overall Fire Support Requirements from CLF
NGF Overall Requirements from CATF

FUNCTIONAL REQUIREMENTS: Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: COMPARE OVERALL REQUIREMENTS TO MEANS

KEYWORD: Compare

REFERENCE: FMFM 7-1

CLASS:
Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Consolidated Overall Fire Support Requirements
Fire Support Means of All Supporting Arms

FUNCTIONAL REQUIREMENTS:
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: ADJUST PRELIMINARY FIRE SUPPORT PLANS

KEYWORD: Adjust

REFERENCE: FMFM 7-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Updated Information on Enemy Forces, Capabilities, etc.

FUNCTIONAL REQUIREMENTS:
Formulation of Courses of Action
Analysis of Outcomes and Impacts

TASK: DETERMINE DETAILED REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 5-1
FMFM 7-2
FMFM 7-4

SUBTASKS: Determine Detailed NGF Support Requirements
Determine Detailed Air Support Requirements
Determine Detailed Artillery Requirements

TASK: DETERMINE DETAILED NGF SUPPORT REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 7-2

SUBTASKS:
Analyze Targets
Compute Ammunitions
Compute Duration of Pre-D-Day Bombardment
Compute Ship and Aircraft Requirements
Estimate Post-D-Day Daily Requirements

TASK: ANALYZE TARGETS

KEYWORD: Analyze

REFERENCE: FMFM 7-2

CLASS:
Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Statement of Mission
List of Targets Under Consideration
Characteristics of Supporting Arms

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: COMPUTE AMMUNITIONS

KEYWORD: Compute

REFERENCE: FMFM 7-2

CLASS:
- Single Attribute
- Group
- Static
- One Shot
- Risk
- Concrete
- Well-Defined
- Decision Execution
- Time Relaxed
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- List of All Targets to Be Attacked
- Characteristics of Weapons

FUNCTIONAL REQUIREMENTS:
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: COMPUTE DURATION OF PRE-D-DAY BOMBARDMENT

KEYWORD: Compute

REFERENCE: FMFM 7-2

CLASS:
Multi-attribute
Group
Static
One Shot
Risk
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Total Number of Missions to Be Fired
Number and Type of Ships Available for Pre-D-Day Fires

FUNCTIONAL REQUIREMENTS:
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: COMPUTE SHIP AND AIRCRAFT REQUIREMENTS

KEYWORD: Compute

REFERENCE: FMFM 7-2

CLASS:
- Multi-attribute
- Group
- Static
- One Shot
- Risk
- Concrete
- Well-Defined
- Decision Execution
- Time Critical
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- Total Number of Targets to Be Attacked
- Capabilities of Ships And Aircraft Available

FUNCTIONAL REQUIREMENTS:
- Analysis of Outcomes and Impacts
- Risks and Probability Assignments

TASK: ESTIMATE POST-D-DAY DAILY REQUIREMENTS

KEYWORD: Estimate

REFERENCE:
FMFM 7-2

CLASS:
Multi-attribute
Group
Static
One Shot
Risk
Concrete
Well-Defined
Decision Execution
Time Critical
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Amount of Artillery and Air Support Required
Number of Ships and Ammunition Available
Enemy Situation
Planned Activity of the Landing Force

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE DETAILED AIR SUPPORT REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 5-1

SUBTASKS:
Analyze Targets and Mission
Determine Amount of Aviation Required
Determine Ammunition, Bombs, and Rockets
Determine Supply and Resupply Requirements

TASK: ANALYZE TARGETS AND MISSION

KEYWORD: Analyze

REFERENCE: FMFM 5-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Statement of Mission
List of Targets under Consideration

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE AMOUNT OF AVIATION REQUIRED

KEYWORD: Determine

REFERENCE: FMFM 5-1

CLASS:
- Multi-attribute
- Group
- Static
- One Shot
- Risk
- Concrete
- Well-Defined
- Decision Execution
- Time Relaxed
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- Mission of the LF
- Scheme of Maneuver
- Enemy Situation
- Estimated Duration of the Operation
- Employment of Other Fire Support Means
- Employment Of Nuclear Weapons

FUNCTIONAL REQUIREMENTS:
- Criteria Assignment
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: DETERMINE AMMUNITION, BOMBS, AND ROCKETS

KEYWORD: Determine

REFERENCE: FMFM 5-1

CLASS:
- Single Attribute
- Group
- Static
- One Shot
- Risk
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- Preliminary Estimate of Air Support Requirements
- Characteristics of Targets

FUNCTIONAL REQUIREMENTS:
- Criteria Assignment
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: DETERMINE SUPPLY AND RESUPPLY REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 5-1

CLASS:
Multi-attribute
Group
Dynamic
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Determination of Amount of Ammunition Required
Estimated Duration of the Operation

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE DETAILED ARTILLERY REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 7-4

SUBTASKS:
- Analyze Mission, Scheme of Maneuver, and Enemy Forces
- Determine Artillery Required
- Compute Ammunition
- Estimate Resupply
- Analyze Effect of NGF and Air Support on Artillery Requirements

TASK: ANALYZE MISSION, SCHEME OF MANEUVER, AND ENEMY FORCES

KEYWORD: Analyze

REFERENCE: FMFM 7-4

CLASS:
- Multi-attribute
- Group
- Dynamic
- One Shot
- Certainty
- Concrete
- Well-Defined
- Decision Execution
- Time Relaxed
- Normal Range
- Type 2 (Alternative Selection)

INPUTS: CLF's Decision to Ensure Adequate Artillery Support

FUNCTIONAL REQUIREMENTS:
- Criteria Assignment
- Establish Decision Rules
- Risks and Probability Assignments

TASK: DETERMINE ARTILLERY REQUIRED

KEYWORD: Determine

REFERENCE: FM: 7-4

CLASS:
- Multi-attribute
- Group
- Static
- One Shot
- Certainty
- Concrete
- Well-Defined
- Decision Execution
- Time Relaxed
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- Scheme of Maneuver
- Enemy Situation
- Characteristics of the Area of Operations
- Estimated Duration of the Operation
- Employment of Other Fire Support Means

FUNCTIONAL REQUIREMENTS:
- Criteria Assignment
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: COMPUTE AMMUNITION

KEYWORD: Compute

REFERENCE: FMFM 7-4

CLASS:
- Multi-attribute
- Group
- Static
- One Shot
- Risk
- Concrete
- Well-Defined
- Decision Execution
- Time Relaxed
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- Mission of the Landing Force
- Scheme of Maneuver
- Enemy Situation

FUNCTIONAL REQUIREMENTS:
- Criteria Assignment
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: ESTIMATE RESUPPLY

KEYWORD: Estimate

REFERENCE: FMFM 7-4

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Scheme of Maneuver
Enemy Situation
Characteristics of the Area of Operations
Estimated Duration of the Operation
Employment of Other Fire Support Means

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: ANALYZE EFFECT OF NCF AND AIR SUPPORT ON ARTILLERY REQUIREMENTS

KEYWORD: Analyze

REFERENCE: FMFM 7-4

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 1 (Problem Structuring)

INPUTS:
Preliminary Air Support Requirements
Preliminary NCF Requirements

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action

TASK: COORDINATE DETERMINATION OF REQUIREMENTS

KEYWORD: Coordinate

REFERENCE: FMFM 7-1

SUBTASKS: Determine Target Classification and Priority
Select Most Effective Means of Attacking Targets
Determine Method and Sequence of Attack of Targets

TASK: DETERMINE TARGET CLASSIFICATION AND PRIORITY

KEYWORD: Determine

REFERENCE: FMFM 7-1

CLASS:
Multi-attribute
Group
Dynamic
Repetitive
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Statement of Mission
Target Lists from All Levels of the Landing Force
Current Target Bulletins

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: SELECT MOST EFFECTIVE MEANS OF ATTACKING TARGETS

KEYWORD: Select

REFERENCE: FMFM 7-1

CLASS:
Multi-attribute
Group
Dynamic
One Shot
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Situation of Opposing Forces
Target Characteristics
Available Means of Attack

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE METHOD AND SEQUENCE OF ATTACK OF TARGETS

KEYWORD: Determine

REFERENCE: FMFM 7-1

CLASS:
Multi-attribute
Group
Dynamic
Repetitive
Risk
Abstract
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Analysis and Comparison of Most Effective Means of Attack

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEVELOP COORDINATION MEASURES

KEYWORD: Coordinate

REFERENCE: FMFM 7-1

SUBTASKS:
Define Zones of Fire
Define Boundaries
Define Coordinated Fire Line
Define Fire Support Coordination Line
Define Restrictive Fire Lines
Define Airspace Coordination Area
Define Trajectory Limitations
Define Free-Fire Area
Define No-Fire Area
Define Restrictive Fire Area

TASK: DEFINE ZONES OF FIRE

KEYWORD: Define

REFERENCE: FMFM 7-1

CLASS:
- Multi-attribute
- Group
- Dynamic
- Repetitive
- Certainty
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
- Scheme of Maneuver of Supported Troop Units
- Preliminary NGF Support Plan
- Preliminary Artillery Support Plan

FUNCTIONAL REQUIREMENTS:
- Recognition of Option Existence and Constraints
- Establishment of Plausibility Domains
- Formulation of Courses of Action
- Criteria Assignment
- Establish Decision Rules
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: DEFINE BOUNDARIES

KEYWORD: Define

REFERENCE: FMFM 7-1

CLASS:
- Multi-attribute
- Group
- Dynamic
- One Shot
- Certainty
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
- Characteristics of the Terrain
- Size, Visibility, and Accessibility to Fire

FUNCTIONAL REQUIREMENTS:
- Recognition of Option Existence and Constraints
- Establishment of Plausibility Domains
- Formulation of Courses of Action
- Criteria Assignment
- Establish Decision Rules
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: DEFINE COORDINATED FIRE LINE

KEYWORD: Define

REFERENCE: FMFM 7-1

CLASS:
Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Scheme of Maneuver of Supported Troop Units
Each Battalion's Recommended Coordinated Fire Lines

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEFINE FIRE SUPPORT COORDINATION LINE

KEYWORD: Define

REFERENCE: FMFM 7-1

CLASS:
Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Commander's Selection of Areas to Patrol and Penetrate
Overall Scheme of Maneuver
Terrain and Weather
Type of Air and NGF Support

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assigments
Analysis of Outcomes and Impacts

TASK: DEFINE RESTRICTIVE FIRE LINES

KEYWORD: Define

REFERENCE: FMFM 7-1

CLASS:
Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Scheme of Maneuver of Both Friendly Forces
Characteristics of Terrain near Stationary Force

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE AIRSPACE COORDINATION AREA

KEYWORD: Determine

REFERENCE: FMFM 7-1

CLASS:
- Multi-attribute
- Group
- Dynamic
- One Shot
- Certainty
- Concrete
- Well-Defined
- Decision-Making
- Time Related
- Normal Range
- Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
- Request for Close Air Support
- REuest for Employment of Helicopters
- Amount of Friendly Surface Fire

FUNCTIONAL REQUIREMENTS:
- Recognition of Option Existence and Constraints
- Establishment of Plausibility Domains
- Formulation of Courses of Action
- Criteria Assignment
- Establish Decision Rules
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: DEFINE TRAJECTORY LIMITATIONS

KEYWORD: Define

REFERENCE: FMFM 7-1

CLASS:
Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Trajectory Charts for Artillery and NGF
List of Critical Targets Requiring Immediate Fire

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEFINE FREE-FIRE AREA

KEYWORD: Define

REFERENCE: FMFM 7-1

CLASS:
Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: LF Determination of Need of Fire-Free Area

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEFINE NO-FIRE AREA

KEYWORD: Define

REFERENCE: FMFM 7-1

CLASS:
- Multi-attribute
- Group
- Dynamic
- One Shot
- Certainty
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
- Identification by Host Country of Proposed No-Fire Areas
- Changes to Previous No-Fire Areas

FUNCTIONAL REQUIREMENTS:
- Recognition of Option Existence and Constraints
- Establishment of Plausibility Domains
- Formulation of Courses of Action
- Criteria Assignment
- Establish Decision Rules
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: DEFINE RESTRICTIVE FIRE AREA

KEYWORD: Define

REFERENCE: FMFM 7-1

CLASS:
Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Commander's Determination of Need for Close Defensive Fire to Suuport Troops

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEVELOP PLANS FOR FIRE AND AIR SUPPORT

KEYWORD: Plan

REFERENCE: FMFM 5-1
FMFM 7-1
FMFM 7-2
FMFM 7-4

SUBTASKS: Develop NGF Plan
Develop Air Support Plan
Develop Artillery Plan
Resolve Conflicts and Adjust Plans
Develop Fire Support Coordination Tab

TASK: DEVELOP MGF PLAN

KEYWORD: Plan

REFERENCE: FMFM 7-2

CLASS:
- Multi-attribute
- Group
- Static
- One Shot
- Risk
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
- Detailed MGF Requirements
- Fire Support Available
- Statement of Mission

FUNCTIONAL REQUIREMENTS:
- Recognition of Option Existence and Constraints
- Establishment of Plausibility Domains
- Formulation of Courses of Action
- Criteria Assignment
- Establish Decision Rules
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: DEVELOP AIR SUPPORT PLAN

KEYWORD: Plan

REFERENCE: FMFM 5-1

CLASS:
- Multi-attribute
- Group
- Dynamic
- One Shot
- Certainty
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
- Statement of Mission
- MGF Plan
- Detailed Air Support Requirements

FUNCTIONAL REQUIREMENTS:
- Recognition of Option Existence and Constraints
- Establishment of Plausibility Domains
- Formulation of Courses of Action
- Criteria Assignment
- Establish Decision Rules
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: DEVELOP ARTILLERY PLAN

KEYWORD: Plan

REFERENCE: FMFM 7-4

CLASS:
Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Scheme of Maneuver
Enemy Situation
Characteristics of the Area of Operations
Employment of Other Fire Support Means

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: RESOLVE CONFLICTS AND ADJUST PLANS

KEYWORD: Resolve

REFERENCE: FMFM 7-1

CLASS:
Multi-attribute
Group
Static
Repetitive
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Statement of Mission
Scheme of Maneuver
Supporting Arms Plans
Target Classifications and Priorities

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DEVELOP FIRE SUPPORT COORDINATION TAP

KEYWORD: Coordinate

REFERENCE: FMFM 7-1

CLASS:
Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Definet
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Communications from Supporting Arms Representatives
Maneuver Unit Reports Passed by the Unit Staff

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: COORDINATE PLANNED FIRES WITH ONGOING TROOP MOVEMENTS

KEYWORD: Coordinate

REFERENCE: FMFM 7-1

CLASS:
Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Detailed Fire Plans of the Supporting Arms
Current Position of Tactical Units

FUNCTIONAL REQUIREMENTS:
Comparison of Actual and Desirable States
Analysis of Outcomes and Impacts
Impact Evaluation
Recognition of Change

TASK: RESOLVE CONFLICTS BETWEEN SCHEDULED FIRES AND TACTICAL OPERATIONS

KEYWORD: Resolve

REFERENCE: FNFM 7-1

CLASS:
- Multi-attribute
- Group
- Dynamic
- One Shot
- Certainty
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
- Plan of Scheduled Fires
- Current Plan for Tactical Operations
- Display of Tactical Situation

FUNCTIONAL REQUIREMENTS:
- Problem Emergency Criteria and Thresholds
- Comparison of Actual and Desirable States
- Analysis of Outcomes and Impacts
- Impact Evaluation
- Recognition of Change

TASK: MONITOR REQUESTS FOR FIRE SUPPORT

KEYWORD: Monitor

REFERENCE: FMFM 7-1

CLASS:
- Multi-attribute
- Group
- Dynamic
- Repetitive
- Risk
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
- Requests for Fire Support
- Current Tactical Situation
- Fires Available
- Coordination Measures

FUNCTIONAL REQUIREMENTS:
- Recognition of Option Existence and Constraints
- Establishment of Plausibility Domains
- Formulation of Courses of Action
- Criteria Assignment
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: COORDINATE TARGETS OF OPPORTUNITY AND SUPPORTING ARMS

KEYWORD: Coordinate

REFERENCE: FMFM 7-1

CLASS:
- Multi-attribute
- Group
- Dynamic
- Repetitive
- Risk
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
- Reconnaissance and Intelligence Reports
- Availability of Supporting Arms

FUNCTIONAL REQUIREMENTS:
- Comparison of Actual and Desirable States
- Situation Monitoring Parameters
- Criteria Assignment
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts
- Impact Evaluation
- Recognition of Change

TASK: DETERMINE THE EFFECT OF FIRE

KEYWORD: Determine

REFERENCE: FMFM 7-1

CLASS:
- Single Attribute
- Group
- Dynamic
- Repetitive
- Certainty
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- Target Bulletins
- Effects Needed to Accomplish Specific Tactical Mission

FUNCTIONAL REQUIREMENTS:
- Criteria Assignment
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: UPDATE CONTROL MEASURES FOR FRIENDLY FIRES

KEYWORD: Update

REFERENCE: FMFM 7-1

CLASS:
Multi-attribute
Group
Dynamic
Repetitive
Risk
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Detailed Fire Plans for the Supporting Arms
Current Position of Tactical Units
Target Bulletins

FUNCTIONAL REQUIREMENTS:
Problem Emergency Criteria and Thresholds
Formulation of Courses of Action
Analysis of Outcomes and Impacts
Impact Evaluation
Recognition of Change
Short Range and Long Range Evaluation

TASK: DEVELOP LOGISTICS ESTIMATE

KEYWORD: Estimate

REFERENCE: FMFM 4-1

CLASS:
- Multi-attribute
- Individual
- Static
- One Shot
- Certainty
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- Commander's Planning Guidance
- Assessment of Logistic Capabilities and Limitations
- Other Staff Estimates

FUNCTIONAL REQUIREMENTS:
- Criteria Assigrment
- Risks and Probability Assigrments
- Analysis of Outcomes and Impacts

TASK: DEVELOP PERSONNEL ESTIMATE

KEYWORD: Estimate

REFERENCE: FMFM 4-1

SUBTASKS: Assess Personnel Situation
Compare Courses of Action from a Personnel Standpoint

TASK: ASSESS PERSONNEL SITUATION

KEYWORD: Assess

REFERENCE: FMFM 4-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS: Reports from Subordinate Officers

FUNCTIONAL REQUIREMENTS:
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: COMPARE COURSES OF ACTION FROM A PERSONNEL STANDPOINT

KEYWORD: Compare

REFERENCE: FMFM 4-1

CLASS:
Multi-Attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Commander's Planning Guidance
Personnel Situation

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Criteria Assignment
Establish Decision Rules
Risks and Probability Assignments

TASK: FINALIZE CONCEPTS OF LOGISTIC SUPPORT

KEYWORD: Finalize

REFERENCE: FMFM 4-1

SUBTASKS:
Determine Supply and Resupply Requirements
Determine Transportation Requirements
Make Loss Estimates
Determine Medical Requirements
Determine Service Requirements

TASK: DETERMINE SUPPLY AND RESUPPLY REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 4-1

CLASS:
Multi-attribute
Group
Static
One Shot
Risk
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Requirements for Logistic Support
Troop Units to Be Supported
Expected Duration of the Operation

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE TRANSPORTATION REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 4-1

CLASS:
- Multi-attribute
- Group
- Static
- One Shot
- Risk
- Concrete
- Well-Defined
- Decision Execution
- Time Relaxed
- Normal Range
- Type 2 (Alternative Selection)

INPUTS:
- Mission of the Landing Force
- Enemy Capabilities
- Characteristics of the Operation
- Strength and Composition of the Landing Force

FUNCTIONAL REQUIREMENTS:
- Criteria Assignment
- Risks and Probability Assignments
- Analysis of Outcomes and Impacts

TASK: MAKE LOSS ESTIMATES

KEYWORD: Estimate

REFERENCE: FMFM 4-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Ambiguous
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Type of Operation
Expected Length of Operation
Enemy Situation
Friendly Personnel Situation

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE MEDICAL REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 4-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Mission of the Landing Force
Characteristics of the Objective Area
Enemy Capabilities
Strength and Composition of the Landing Force
Time Span of the Operation
Loss Estimates

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: DETERMINE SERVICE REQUIREMENTS

KEYWORD: Determine

REFERENCE: FMFM 4-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Mission of the Landing Force
Enemy Capabilities
Strength and Composition of the Landing Force
Time Span of the Operation
Loss Estimates

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: ALLOCATE MEANS

KEYWORD: Allocate

REFERENCE: FMFM 4-1

SUBTASKS: Allocate Means to Subordinate Echelons
Assign Logistic Support Responsibilities

TASK: ALLOCATE MEANS TO SUBORDINATE ECHELONS

KEYWORD: Allocate

REFERENCE: FMFM 4-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Planned Location of Supply Installations
Available Combat Service Support Units in Vicinity of Installations

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: ASSIGN LOGISTIC SUPPORT RESPONSIBILITIES

KEYWORD: Assign

REFERENCE: FMFM 4-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Planned Location of Service Installations
Helicopter Landing Zones and Operating Areas

FUNCTIONAL REQUIREMENTS:
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: COMPUTE DETAILED REQUIREMENTS

KEYWORD: Compute

REFERENCE: FMFM 4-1

SUBTASKS: Compute Number of Ships and Craft Required
Phase Sequence of Logistics Support
Schedule Resupply

TASK: COMPUTE NUMBER OF SHIPS AND CRAFT REQUIRED

KEYWORD: Compute

REFERENCE: FMFM 4-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 2 (Alternative Selection)

INOUTS:
Statement of the Mission
Troop List

FUNCTIONAL REQUIREMENTS:
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: PHASE SEQUENCE OF LOGISTICS SUPPORT

KEYWORD: Phase

REFERENCE: FMFM 4-1

CLASS:
Multi-attribute
Group
Static
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Mission of the Landing Force
Characteristics of the Objective Area
Enemy Capabilities
Chatracteristics of the Operation to Be Supported
Strength and Composition of the Landing Force
Time Span of the Operation

FUNCTIONAL REQUIREMENTS:
Comparison of Actual and Desirable States
Recognition of Option Existence and Constraints
Establishment of Plausibility Domains
Formulation of Courses of Action
Analysis of Outcomes and Impacts

TASK: SCHEDULE RESUPPLY

KEYWORD: Schedule

REFERENCE: FMFM 4-1

CLASS:
- Multi-attribute
- Group
- Static
- One Shot
- Certainty
- Concrete
- Well-Defined
- Decision-Making
- Time Relaxed
- Normal Range
- Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
- Current Resupply Needs
- Amount and Condition of Supplies on Hand
- Availability of Transportation

FUNCTIONAL REQUIREMENTS:
- Recognition of Option Existence and Constraints
- Establishment of Plausibility Domains
- Formulation of Courses of Action
- Analysis of Outcomes and Impacts

TASK: UPDATE PLANS ACCORDING TO RESULTS OF REHEARSALS

KEYWORD: Update

REFERENCE: FMFM 4-1

CLASS:
Multi-attribute
Individual
Static
One Shot
Certainty
Concrete
Well-Defined
Decision Execution
Time Relaxed
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS: Evaluation of the Rehearsal

FUNCTIONAL REQUIREMENTS:
Formulation of Courses of Action
Criteria Assignment
Risks and Probability Assignments
Analysis of Outcomes and Impacts

TASK: CONTROL

KEYWORD: Control

REFERENCE:

FMFM 4-1

SUBTASKS:

Monitor Landing Progress
Monitor Unloading Period
Coordinate Flow of Men , Materiel, and Equipment
Monitor Level of Supplies for Combat Units
Monitor Channels of Supplies, Service, and Communication

TASK: MONITOR LANDING PROGRESS

KEYWORD: Monitor

REFERENCE: FMFM 4-1

CLASS:
Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Instantaneous Landing Force Requirements
Needs of the Assault Units
Landing Plan

FUNCTIONAL REQUIREMENTS:
Formulation of Courses of Action
Analysis of Outcomes and Impacts
Impact Evaluation
Recognition of Change

TASK: MONITOR UNLOADING PERIOD

KEYWORD: Monitor

REFERENCE: FMFM 4-1

CLASS:
- Multi-attribute
- Group
- Dynamic
- Repetitive
- Certainty
- Concrete
- Well-Defined
- Decision-Making
- Time Critical
- Normal Range
- Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
- Logisitic Plans
- Current Situation

FUNCTIONAL REQUIREMENTS:
- Formulation of Courses of Action
- Analysis of Outcomes and Impacts
- Impact Evaluation
- Recognition of Change
- Short Range and Long Range Evaluation

TASK: COORDINATE FLOW OF MEN, MATERIEL, AND EQUIPMENT

KEYWORD: Coordinate

REFERENCE: FMFM 4-1

CLASS:
Multi-attribute
Group
Dynamic
One Shot
Certainty
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
Needs of Area Commanders
Overall Need of the Landing Force

FUNCTIONAL REQUIREMENTS:
Analysis of Outcomes and Impacts
Impact Evaluation

TASK: MONITOR LEVEL OF SUPPLIES FOR COMBAT UNITS

KEYWORD: Monitor

REFERENCE: FMFM 4-1

CLASS:
- Multi-attribute
- Group
- Dynamic
- Repetitive
- Risk
- Concrete
- Well-Defined
- Decision-Making
- Time Critical
- Normal Range
- Type 3 (Problem Structuring and Alternative Selection)

INPUTS:
- Degree of Unit Seperation
- Overall Tactical Plan
- Current Tactical Situation

FUNCTIONAL REQUIREMENTS:
- Criteria Assigrment
- Establish Decision Rules
- Risks and Probability Assigrments
- Analysis of Outcomes and Impacts
- Impact Evaluation

TASK: MONITOR CHANNELS OF SUPPLY, SERVICE, AND COMMUNICATION

KEYWORD: Monitor

REFERENCE: FMFM 4-1

CLASS:
Multi-attribute
Group
Dynamic
Repetitive
Certainty
Concrete
Well-Defined
Decision-Making
Time Critical
Normal Range
Type 2 (Alternative Selection)

INPUTS:
Enemy Situation
Degree of Unit Seperation
Current Tactical Situation

FUNCTIONAL REQUIREMENTS:
Risks and Probability Assignments
Analysis of Outcomes and Impacts
Impact Evaluation
Recognition of Change
Short Range and Long Range Evaluation